**⚠Warning**
This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advice non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service manual by anyone else could result in serious injury or death.

Order No.
AVS1302421T0 S16
W-294

# Technical Information

**Security & Networks Business Unit**

## Subject: Symptom of WV-ASM200 freeze image.

## <Symptom>

1. Video Update is Slow
2. Sometime camera image will freeze in Live screen ( Specially multi screen mode)

## <Cause of Symptom>

1. WV-ASM200 is required high performance PC. Must follow min-system requirements. But most of case related system does not meet min-system requirements.

   - CPU: Intel® Core™ i5-2400, 2500, Intel® Core™ i7-860 or faster
     When using the license for WV-ASE202,CPU should use Intel® Core™ i7-2600 or faster
   - RAM: 3 GB or more,
     When using more than one live window: 4 GB or more
   - VRAM: 512 MB or more (256 MB min.),
   - Microsoft® DirectX® 9.0c or later
   - Web Browser : Internet Explorer® 7.0 or later (depends on a connected device)

2. WV-ASM200 is required high performance video graphic card to keep performance. But most of case related system does not meet our requirements.
   - Do not use on board graphic function.
   - Do not use cost effective graphic card
   - Use following Recommend graphic card or higher performance graphic card.
     1. **NVIDIA :Quadro NVS 450**
     2. **ATI: FirePro2460**

3. Refer performance test result “PC Software package The expansion software the result of verification for capability V1.00” for details settings and performance of WV-ASM200.

**If your system does not meet the min- system requirements, factory can not be guaranteed any ASM200 performance.**

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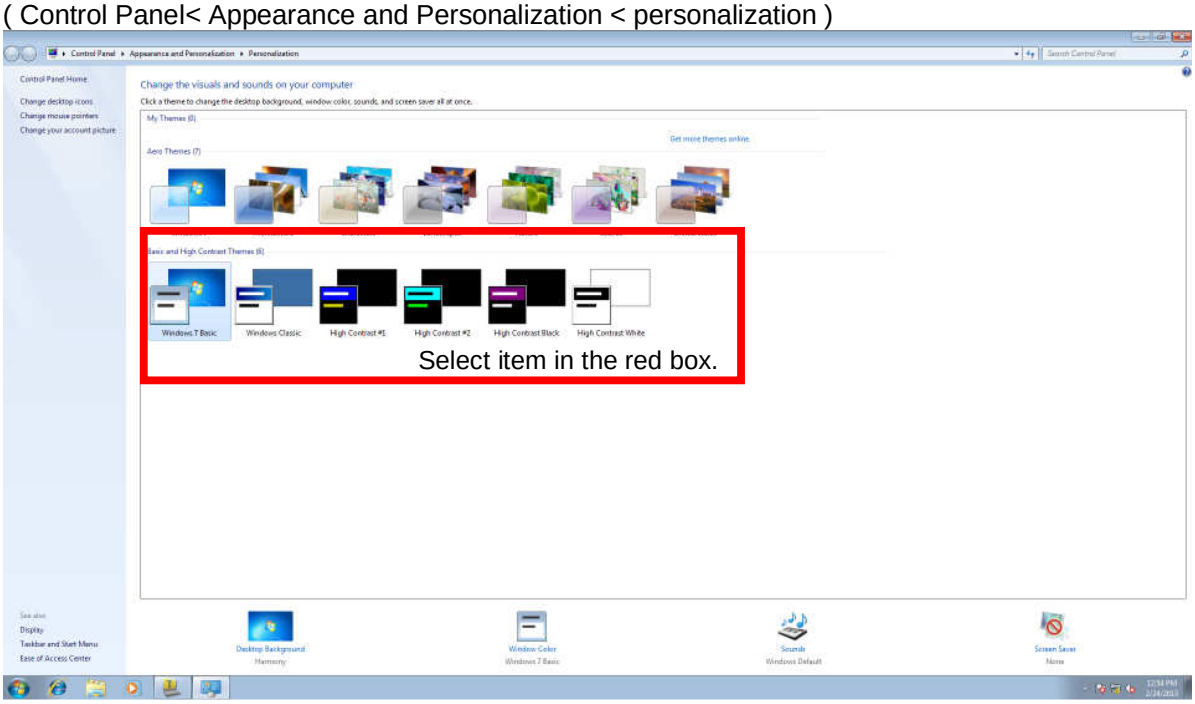
## < PC Settings >

Some of PC settings will effects performance of WV-ASM200. please follow PC settings below.

1. Windows Aero settings.-OFF
( Control Panel< Appearance and Personalization < personalization )



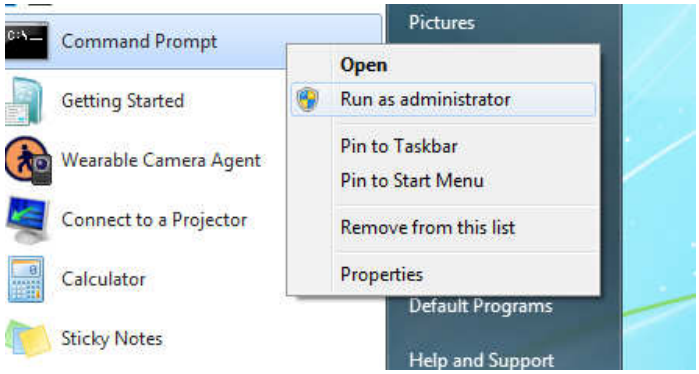

2. On board Ethernet function –Use NIC card. Do not use ON board NIC.
During factory QA test we found bad compatibility between ASM200 and on board NIC.

<Countermeasure>

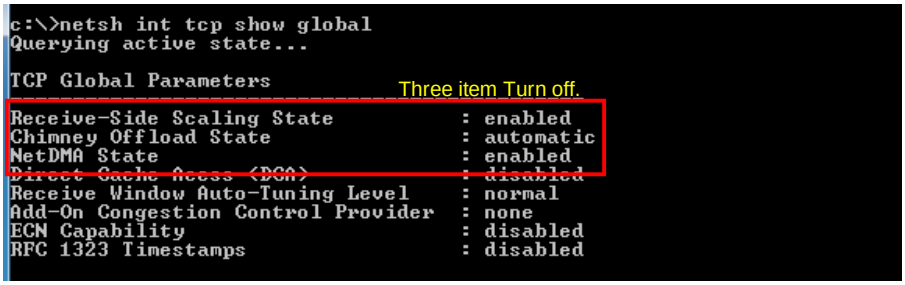
1.Exchange original NIC to expanded NIC.
2.In case of Japan, Factory recommends the following models:
Model number：FS215AA
Model name：Broadcom NetXtreme Giga-bit Ether Plus(1x PCI Express)

3. Network function. –Turn off SNP settings.
( Improve network stability and performance for Windows 7 )

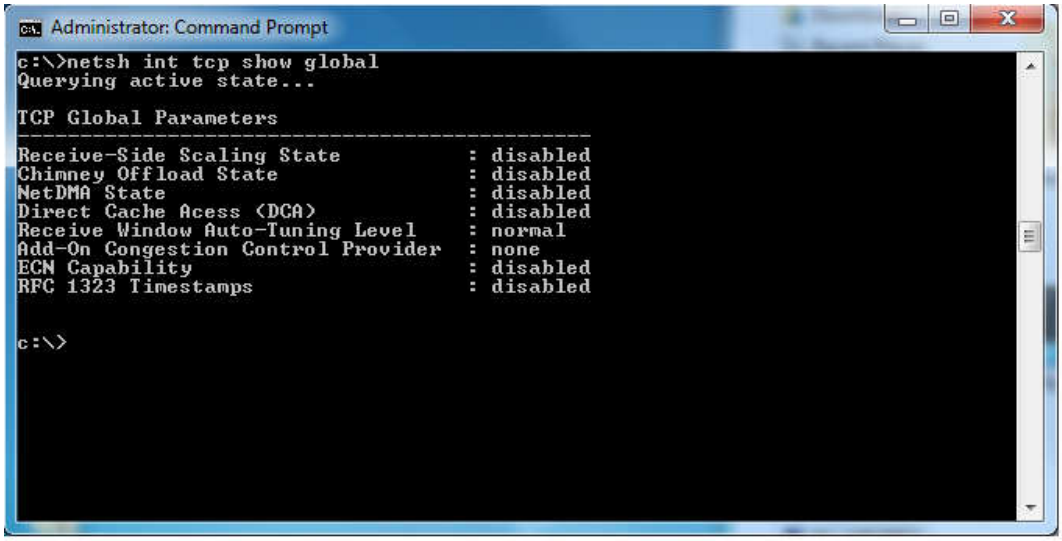
1. Start Command Prompt “Run as administrator.”



2. input “C:¥ netsh int tcp show global” Enter.


c:\>netsh int tcp show global
Querying active state...
TCP Global Parameters
Three item Turn off.
Receive-Side Scaling State : enabled
Chimney Offload State : automatic
NetDMA State : enabled
Direct Cache Acess (DCA) : disabled
Receive Window Auto-Tuning Level : normal
Add-On Congestion Control Provider : none
ECN Capability : disabled
RFC 1323 Timestamps : disabled

3. input “ c:¥ netsh int tcp set global chimney=disabled ” Enter
4. input “ c:¥ netsh int tcp set global rss=disabled ” Enter
5. input “ c:¥ netsh int tcp set global netdma=disabled ” Enter
6. input “C:¥ netsh int tcp show global” Enter. Again.


Administrator: Command Prompt
c:\>netsh int tcp show global
Querying active state...
TCP Global Parameters
Receive-Side Scaling State : disabled
Chimney Offload State : disabled
NetDMA State : disabled
Direct Cache Acess (DCA) : disabled
Receive Window Auto-Tuning Level : normal
Add-On Congestion Control Provider : none
ECN Capability : disabled
RFC 1323 Timestamps : disabled
c:\>

## < Requirements for System designs >

1. Use gigabit port to ASM200, when you use multi screen mode. ( do not use 100Mbps port )
2. Calculate total network bandwidth Camera / Recorder /WV-ASM200
3. Use Stream type “Auto” in Camera settings and Recorder settings.
4. Do not use Recorder output for multi screen. use camera direct mode.
5. Refer performance test result “PC Software package The expansion software the result of verification for capability V1.00” for details settings and performance of WV-ASM200.
6. Refer “IP Video Surveillance System Design Guide i-PRO Series H.264 System Edition (For mid to large-scale systems) Ver. 3.4” Page-83 “Designing the details of Monitoring and Management software “

## < Required system information for ASM200 question>

1. ASM 200 version number & optional license
2. “ dxdiag “ Information or msinfo32.exe information.
3. ASM200 log information
4. ASM200 Setting data ( ASM200 Setting Backup data )
5. System Diagram ( including Network connection )

Without these information factory can not answer your question rightly.

# PC Software package
# The expansion software
# (DG-ASE201/DG-ASE202)

# The result of verification for capability
V1.00

2012 / 6/ 15

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Panasonic ideas for life

# WV-ASE201、WV-ASE202 recommended PC

## Recommended PC1

HP Compaq 8200 Elite MT Desktop PC
http://h50146.www5.hp.com/products/desktops/8200_mtct/specs/le293pa_abj.html

*Please use a memory size more than 4 GB at ASE202 use

＊Option NIC：Please add FS215AA

NVIDIA Quadro NVS 450 ✕ 2

http://www.elsa-jp.co.jp/products/graphicsboard/quadro_nvs450/index.html

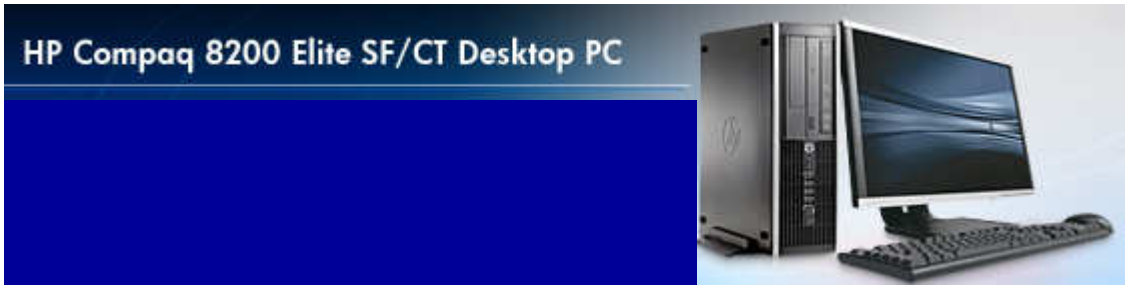
＊Please set “OFF” in Windows Aero setting.

**When it is seen the space-saving, there is a limit of the performance, but recommends the following.**

## Recommended PC2

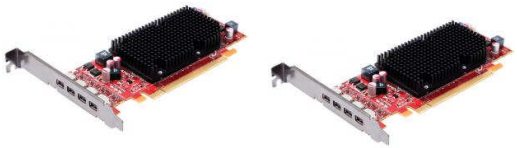
HP Compaq 8200 Elite SF Desktop PC
http://h50146.www5.hp.com/products/desktops/8200_sfct/specs/le291pa_abj.html

*Please use a memory size more than 4 GB at ASE202 use




＊Option NIC：Please add FS215AA

ATI FirePro2460 ✕ 2



http://www.acube-corp.com/products/firepro-multi-view/firepro2460pci-ex16.html

*Low profile compliant

*If the user set 4 screens by DVI transmission using option cable, it is needed to be connected with same display( Size, model is same) regarding the port1 and port2, port3 and port4.

If you set a graphic card , please set “Off” of Windows Aero setting

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# WV-ASE201 result of verification

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# WV-ASE201 reusult -H.264 multi view live display-

Japan model

## Verification PC

HP Compaq 8200 Elite SF Desktop PC(32bit) ＋ ATI FirePro2460
HP Compaq 8200 Elite SF Desktop PC(64bit) ＋ ATI FirePro2460
HP Compaq 8200 Elite MT Desktop PC(32bit) ＋ NVIDIA Quadro NVS 450
※ HP Compaq 8200 Elite MT Desktop PC(64bit) is verifying now

CPU：Core i7-2600
：3GB memory

## Resolution：FULL HD

* It is changed to full rate display only 1 frame (window) from ASM200 Ver1.10.

Full frame rate | I frame display

| Display Num. / fps | Only operation monitor | | | | Operation monitor + Live monitor | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 4 | 9 | 16 | 1 | 1 | 1 | 4 | 1 | 9 | 1 | 16 | 4 | 4 | 4 | 9 | 4 | 16 | 9 | 9 | 9 | 16 | 16 | 16 |
| 30 | ○ | ○ | ○ | ○ | ○ | | ○ | | ○ | | ○ | | ○ | | ○ | | ○ | | ○ | | - | | - | |

## Resolution：SXVGA

| Display Num. / fps | Only operation monitor | | | | Operation monitor + Live monitor | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 4 | 9 | 16 | 1 | 1 | 1 | 4 | 1 | 9 | 1 | 16 | 4 | 4 | 4 | 9 | 4 | 16 | 9 | 9 | 9 | 16 | 16 | 16 |
| 30 | ○ | ○ | ○ | ○ | ○ | | ○ | | ○ | | ○ | | ○ ※1 | | ○ | | ○ | | ○ | | - | | - | |
| 15 | ○ | ○ | ○ | ○ | ○ | | ○ | | ○ | | ○ | | ○ | | ○ | | ○ | | ○ | | - | | - | |

※1 HP Compaq 8200 Elite SF Desktop PC(32/64bit) ＋ ATI FirePro2460 ：×

## Resolution：VGA

| Display Num. / fps | Only operation monitor | | | | Operation monitor + Live monitor | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 4 | 9 | 16 | 1 | 1 | 1 | 4 | 1 | 9 | 1 | 16 | 4 | 4 | 4 | 9 | 4 | 16 | 9 | 9 | 9 | 16 | 16 | 16 |
| 30 | ○ | ○ | ○ | ○ | ○ | | ○ | | ○ | | ○ | | ○ | | ○ | | ○ ※2 | | ○ | | - | | - | |

※2 HP Compaq 8200 Elite SF Desktop PC(32/64bit) ＋ ATI FirePro2460 and The method of window display [**Expansion and reduction**] ： ×

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# WV-ASE201 reusult -H.264 multi view live display-

Over sea

**Verification PC**

HP Compaq 8200 Elite SF Desktop PC (32bit) + ATI FirePro2460
HP Compaq 8200 Elite SF Desktop PC (64bit) + ATI FirePro2460
HP Compaq 8200 Elite MT Desktop PC (32bit) + NVIDIA Quadro NVS 450
※HP Compaq 8200 Elite MT Desktop PC (64bit) : We are verifying now.

CPU:Core i7-2600
Memory:3GB

## Resplution:FULL HD

* It is changed to full rate display only 1 frame (window) from ASM200 Ver1.10.

Full frame rate | I frame display

| Display Num. / fps | Only operation monitor | | | | Operation monitor + Live monitor | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 4 | 9 | 16 | 1 | 1 | 1 | 4 | 1 | 9 | 1 | 16 | 4 | 4 | 4 | 9 | 4 | 16 | 9 | 9 | 9 | 16 | 16 | 16 |
| 30 | ○ | ○ | ○ | ○ | ○ | | ○ | | ○ | | ○ | | ○ | | ○ | | ○ | | ○ | | - | | - | |

## Resolution:SXVGA

| Display Num. / fps | Only operation monitor | | | | Operation monitor + Live monitor | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 4 | 9 | 16 | 1 | 1 | 1 | 4 | 1 | 9 | 1 | 16 | 4 | 4 | 4 | 9 | 4 | 16 | 9 | 9 | 9 | 16 | 16 | 16 |
| 30 | ○ | ○ | ○ | ○ | ○ | | ○ | | × | | ○ | | ○ ※1 | | × | | ○ | | × | | - | | - | |
| 15 | ○ | ○ | ○ | ○ | ○ | | ○ | | Under study | | ○ | | ○ | | Under study | | ○ | | Under study | | - | | - | |

※1 HP Compaq 8200 Elite SF Desktop PC (32/64bit) + ATI FirePro2460 : ×

## Resolution:VGA

| Display Num. / fps | Only operation monitor | | | | Operation monitor + Live monitor | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 4 | 9 | 16 | 1 | 1 | 1 | 4 | 1 | 9 | 1 | 16 | 4 | 4 | 4 | 9 | 4 | 16 | 9 | 9 | 9 | 16 | 16 | 16 |
| 30 | ○ | ○ | ○ | ○ | ○ | | ○ | | ○ | | ○ | | ○ | | ○ | | ○ ※2 | | ○ | | - | | - | |

※2 HP Compaq 8200 Elite SF Desktop PC(32/64bit) + ATI FirePro2460 and The method of window display [Expansion and reduction] : ×

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# WV-ASE202 verification result

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# WV-ASE202 verification result -H.264 Multi live display-

## Ex: WV-ASM200 + WV-ASE202

| | PC specification | resolution | Frame rate | Bit rate | Monitor pattern |
|---|---|---|---|---|---|
| 64 | HP Compaq 8200 Elite SF Desktop PC(32/64bit) ＋ ATI FirePro2460<br>HP Compaq 8200 Elite MT Desktop PC(32bit) ＋ NVIDIA Quadro NVS 450 | QVGA | 30fps | 1024kbps | Operation monitor<br>:64 displays |
| 49 | HP Compaq 8200 Elite SF Desktop PC(32/64bit) ＋ ATI FirePro2460<br>HP Compaq 8200 Elite MT Desktop PC(32bit) ＋ NVIDIA Quadro NVS 450 | VGA | 15fps | 1024kbps | Operation monitor<br>:49 displays |
| 36 | HP Compaq 8200 Elite SF Desktop PC(32bit) ＋ ATI FirePro2460<br>HP Compaq 8200 Elite MT Desktop PC(32bit) ＋ NVIDIA Quadro NVS 450 | VGA | 30fps | 1536kbps | Operation monitor<br>:36 displays |
| 25 | HP Compaq 8200 Elite SF Desktop PC(64bit) ＋ ATI FirePro2460 | VGA | 30fps | 1536kbps | Operation monitor<br>:25 displays |

## WV-ASM200 + WV-ASE201 + WV-ASE202

| | PCスペック | resolution | Frame rate | Bit rate | Monitor pattern |
|---|---|---|---|---|---|
| 68 | HP Compaq 8200 Elite MT Desktop PC(32bit) ＋ NVIDIA Quadro NVS 450 | QVGA | 15fps | 768kbps | Operation monitor:4 displays<br>Live monitor 1:16 displays<br>Live monitor 2:16 displays<br>Live monitor 3:16 displays<br>Live monitor 4:16 displays |

※ HP Compaq 8200 Elite MT Desktop PC(64bit) is studying now, so the result is not included.

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# Detail result1

## ～ HP Compaq 8200 Elite MT Desktop PC (32bit) & Quadro NVS 450 × 2 ～

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# Resolution：FULL HD

HP Compaq 8200 Elite MT(32bit) ＋ NVIDIA Quadro NVS 450 ✕ 2

4Mbps, 30fps(Frame rate mode), refresh interval 1sec.

NG judge
1.The video image has delay or jerk phenomenon
2. Over 70% of CPU usage ratio
3. Memory residual quantity: within 500MB

Without Live Monitor

| Operation monitor sprit | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

| Judge | OK | NG | Impossible |
|---|---|---|---|
| Display | Full rate display | I frame display | |

Live monitor number: 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 4 | | | | | | | | |
| 9 | | | | | | | | |
| 16 | | | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | | | | | | | | |
| 64 | | | | | | | | |

Live monitor number : 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕2 | | | | | | | | |
| 4✕2 | | | | | | | | |
| 9✕2 | | | | | | | | |
| 16✕2 | | | | | | | | |
| 25✕2 | | | | | | | | |
| 36✕2 | | | | | | | | |
| 49✕2 | | | | | | | | |
| 64✕2 | | | | | | | | |

Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕3 | | | | | | | | |
| 4✕3 | | | | | | | | |
| 9✕3 | | | | | | | | |
| 16✕3 | | | | | | | | |

Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕4 | | | | | | | | |
| 4✕4 | | | | | | | | |
| 9✕4 | | | | | | | | |
| 16✕4 | | | | | | | | |

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# Resolution：SXVGA Domestic

HP Compaq 8200 Elite MT(32bit) ＋ NVIDIA Quadro NVS 450 ✕ 2

4Mbps, 30fps(Frame rate mode), refresh interval 1sec.

| Judge | OK | NG | Impossible |
|---|---|---|---|
| Display | Full rate display | I frame display | |

NG judge
1.The video image has delay or jerk phenomenon
2. Over 70% of CPU usage ratio
3. Memory residual quantity: within 500MB

## Without Live Monitor

| Operation monitor sprit | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

## Live monitor number: 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 4 | | | | | | | | |
| 9 | | | | | | | | |
| 16 | | | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | | | | | | | | |
| 64 | | | | | | | | |

## Live monitor number : 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1×2 | | | | | | | | |
| 4×2 | | | | | | | | |
| 9×2 | | | | | | | | |
| 16×2 | | | | | | | | |
| 25×2 | | | | | | | | |
| 36×2 | | | | | | | | |
| 49×2 | | | | | | | | |
| 64×2 | | | | | | | | |

## Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1×3 | | | | | | | | |
| 4×3 | | | | | | | | |
| 9×3 | | | | | | | | |
| 16×3 | | | | | | | | |

## Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1×4 | | | | | | | | |
| 4×4 | | | | | | | | |
| 9×4 | | | | | | | | |
| 16×4 | | | | | | | | |

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# Resolution：SXVG Over sea

HP Compaq 8200 Elite MT(32bit) ＋ NVIDIA Quadro NVS 450 ✕ 2

4Mbps, 30fps(Frame rate mode), refresh interval 1sec.

| Judge | OK | NG | Impossible |
|---|---|---|---|
| Display | Full rate display | I frame display | |

NG judge
1.The video image has delay or jerk phenomenon
2. Over 70% of CPU usage ratio
3. Memory residual quantity: within 500MB

Without Live Monitor

| Operation monitor sprit | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

Live monitor number: 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 4 | | | | | | | | |
| 9 | | | | | | | | |
| 16 | | | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | | | | | | | | |
| 64 | | | | | | | | |

Live monitor number : 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1×2 | | | | | | | | |
| 4×2 | | | | | | | | |
| 9×2 | | | | | | | | |
| 16×2 | | | | | | | | |
| 25×2 | | | | | | | | |
| 36×2 | | | | | | | | |
| 49×2 | | | | | | | | |
| 64×2 | | | | | | | | |

Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1×3 | | | | | | | | |
| 4×3 | | | | | | | | |
| 9×3 | | | | | | | | |
| 16×3 | | | | | | | | |

Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1×4 | | | | | | | | |
| 4×4 | | | | | | | | |
| 9×4 | | | | | | | | |
| 16×4 | | | | | | | | |

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# Resolution:VGA

HP Compaq 8200 Elite MT(32bit) + NVIDIA Quadro NVS 450 × 2

1.5Mbps, 30fps(Frame rate mode), refresh interval 1sec.

NG judge

1.The video image has delay or jerk phenomenon

2. Over 70% of CPU usage ratio

3. Memory residual quantity: within 500MB

Without Live Monitor

| Operation monitor sprit | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

| Judge | OK | NG | Impossible |
|---|---|---|---|
| Display | Full rate display | I frame display | |

※ When the method of window display is [Expansion and reduction], It will be NG.

Live monitor number: 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 4 | | | | | | | | |
| 9 | | | | | | | | |
| 16 | | | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | | | | | | | | |
| 64 | | | | | | | | |

Live monitor number : 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1×2 | | | | | | | | |
| 4×2 | | | | | ※ | | | |
| 9×2 | | | | ※ | | | | |
| 16×2 | | | ※ | | | | | |
| 25×2 | | | | | | | | |
| 36×2 | | | | | | | | |
| 49×2 | | | | | | | | |
| 64×2 | | | | | | | | |

Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1×3 | | | | | ※ | | | |
| 4×3 | | | | ※ | | | | |
| 9×3 | | ※ | ※ | | | | | |
| 16×3 | | | | | | | | |

Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1×4 | ※ | ※ | ※ | ※ | ※ | | | |
| 4×4 | ※ | ※ | ※ | | | | | |
| 9×4 | | | | | | | | |
| 16×4 | | | | | | | | |

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# Resolution：QVGA

HP Compaq 8200 Elite MT(32bit) ＋ NVIDIA Quadro NVS 450 ✕ 2

1Mbps, 30fps(Frame rate mode), refresh interval 1sec.

NG judge

1.The video image has delay or jerk phenomenon

2. Over 70% of CPU usage ratio

3. Memory residual quantity: within 500MB

Without Live Monitor

| Operation monitor sprit | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

| Judge | OK | NG | Impossible |
|---|---|---|---|
| Display | Full rate display | I frame display | |

※ When the method of window display is [Expansion and reduction], It will be NG.

Live monitor number: 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 4 | | | | | | | | |
| 9 | | | | | | | | |
| 16 | | | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | | | | | | | | |
| 64 | | | | | | | | |

Live monitor number : 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1×2 | | | | | | | | |
| 4×2 | | | | | | | | |
| 9×2 | | | | | | | | |
| 16×2 | | | | | | | | |
| 25×2 | | | | | | | | |
| 36×2 | | | | | | | | |
| 49×2 | | | | | | | | |
| 64×2 | | | | | | | | |

Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1×3 | | | | | | | ※ | ※ |
| 4×3 | | | | | | | ※ | |
| 9×3 | | | | | | | | |
| 16×3 | | | | | | | | |

Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1×4 | | | | | | | ※ | ※ |
| 4×4 | | | | | | ※ | ※ | |
| 9×4 | | | | | | | | |
| 16×4 | | ※ | | | | | | |

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# Detail result2

## ～ HP Compaq 8200 Elite MT Desktop PC (64bit) & Quadro NVS 450 × 2 ～

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# Under study

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# Detail result3

## ～ HP Compaq 8200 Elite SF Desktop PC (32bit) & FirePro2460 × 2 ～

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# Resolution：FULL HD

HP Compaq 8200 Elite SF Desktop PC(32bit) ＋ Acube FirePro2460 ✕ 2

4Mbps, 30fps(Frame rate mode), refresh interval 1sec.

Without Live Monitor

| Operation monitor sprit | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

| Judge | OK | NG | Impossible |
|---|---|---|---|
| Display | Full rate display | I frame display | |

NG judge
1.The video image has delay or jerk phenomenon
2. Over 70% of CPU usage ratio
3. Memory residual quantity: within 500MB

Live monitor number: 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 4 | | | | | | | | |
| 9 | | | | | | | | |
| 16 | | | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | | | | | | | | |
| 64 | | | | | | | | |

Live monitor number : 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕2 | | | | | | | | |
| 4✕2 | | | | | | | | |
| 9✕2 | | | | | | | | |
| 16✕2 | | | | | | | | |
| 25✕2 | | | | | | | | |
| 36✕2 | | | | | | | | |
| 49✕2 | | | | | | | | |
| 64✕2 | | | | | | | | |

Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕3 | | | | | | | | |
| 4✕3 | | | | | | | | |
| 9✕3 | | | | | | | | |
| 16✕3 | | | | | | | | |

Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕4 | | | | | | | | |
| 4✕4 | | | | | | | | |
| 9✕4 | | | | | | | | |
| 16✕4 | | | | | | | | |

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# Resolution：SXVGA

Domestic

HP Compaq 8200 Elite SF Desktop PC (32bit) ＋ Acube FirePro2460 × 2

4Mbps, 30fps(Frame rate mode), refresh interval 1sec.

NG judge
1.The video image has delay or jerk phenomenon
2. Over 70% of CPU usage ratio
3. Memory residual quantity: within 500MB

Without Live Monitor

| Operation monitor sprit | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

| Judge | OK | NG | Impossible |
|---|---|---|---|
| Display | Full rate display | I frame display | |

Live monitor number : 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 4 | | | | | | | | |
| 9 | | | | | | | | |
| 16 | | | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | | | | | | | | |
| 64 | | | | | | | | |

Live monitor number: 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1×2 | | | | | | | | |
| 4×2 | | | | | | | | |
| 9×2 | | | | | | | | |
| 16×2 | | | | | | | | |
| 25×2 | | | | | | | | |
| 36×2 | | | | | | | | |
| 49×2 | | | | | | | | |
| 64×2 | | | | | | | | |

Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1×3 | | | | | | | | |
| 4×3 | | | | | | | | |
| 9×3 | | | | | | | | |
| 16×3 | | | | | | | | |

Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1×4 | | | | | | | | |
| 4×4 | | | | | | | | |
| 9×4 | | | | | | | | |
| 16×4 | | | | | | | | |

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# Resolution:SXVG Over sea

HP Compaq 8200 Elite SF Desktop PC (32bit) + Acube FirePro2460 × 2

4Mbps, 30fps(Frame rate mode), refresh interval 1sec.

Without Live Monitor

| Operation monitor sprit | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

| Judge | OK | NG | Impossible |
|---|---|---|---|
| Display | Full rate display | I frame display | |

NG judge
1.The video image has delay or jerk phenomenon
2. Over 70% of CPU usage ratio
3. Memory residual quantity: within 500MB

Live monitor number : 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 4 | | | | | | | | |
| 9 | | | | | | | | |
| 16 | | | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | | | | | | | | |
| 64 | | | | | | | | |

Live monitor number : 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1×2 | | | | | | | | |
| 4×2 | | | | | | | | |
| 9×2 | | | | | | | | |
| 16×2 | | | | | | | | |
| 25×2 | | | | | | | | |
| 36×2 | | | | | | | | |
| 49×2 | | | | | | | | |
| 64×2 | | | | | | | | |

Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1×3 | | | | | | | | |
| 4×3 | | | | | | | | |
| 9×3 | | | | | | | | |
| 16×3 | | | | | | | | |

Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1×4 | | | | | | | | |
| 4×4 | | | | | | | | |
| 9×4 | | | | | | | | |
| 16×4 | | | | | | | | |

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# Resolution：VGA

HP Compaq 8200 Elite SF Desktop PC(32bit) ＋ Acube FirePro2460 ✕ 2

1.5Mbps, 30fps(Frame rate mode), refresh interval 1sec.

NG judge

1.The video image has delay or jerk phenomenon

2. Over 70% of CPU usage ratio

3. Memory residual quantity: within 500MB

Without Live Monitor

| Operation monitor sprit | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

| Judge | OK | NG | Impossible |
|---|---|---|---|
| Display | Full rate display | I frame display | |

※ When the method of window display is [Expansion and reduction], It will be NG.

Live monitor number : 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 4 | | | | | | | | |
| 9 | | | | | | | | |
| 16 | | | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | | | | | | | | |
| 64 | | | | | | | | |

Live monitor number : 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕2 | | | | ※ | | | | |
| 4✕2 | | | ※ | | | | | |
| 9✕2 | ※ | | | | | | | |
| 16✕2 | | | | | | | | |
| 25✕2 | | | | | | | | |
| 36✕2 | | | | | | | | |
| 49✕2 | | | | | | | | |
| 64✕2 | | | | | | | | |

Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕3 | | ※ | ※ | | | | | |
| 4✕3 | | | | | | | | |
| 9✕3 | | | | | | | | |
| 16✕3 | | | | | | | | |

Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕4 | ※ | ※ | | | | | | |
| 4✕4 | | | | | | | | |
| 9✕4 | | | | | | | | |
| 16✕4 | | | | | | | | |

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# Resolution：QVGA

HP Compaq 8200 Elite SF Desktop PC(32bit) ＋ Acube FirePro2460 ✕ 2

1Mbps, 30fps(Frame rate mode), refresh interval 1sec.

NG judge

1.The video image has delay or jerk phenomenon

2. Over 70% of CPU usage ratio

3. Memory residual quantity: within 500MB

Without Live Monitor

| Operation monitor sprit | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

| Judge | OK | NG | Impossible |
|---|---|---|---|

| Display | Full rate display | I frame display |
|---|---|---|

※ When the method of window display is [Expansion and reduction], It will be NG.

Live monitor number : 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 4 | | | | | | | | |
| 9 | | | | | | | | |
| 16 | | | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | | | | | | | | |
| 64 | | | | | | | | |

Live monitor number : 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕2 | | | | | ※ | ※ | | |
| 4✕2 | | | | | ※ | ※ | | |
| 9✕2 | | | | | ※ | | | |
| 16✕2 | | | | | | | | |
| 25✕2 | | | | | | | | |
| 36✕2 | | | | | | | | |
| 49✕2 | | | | | | | | |
| 64✕2 | | | | | | | | |

Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕3 | | | | ※ | ※ | ※ | | |
| 4✕3 | | | | ※ | ※ | | | |
| 9✕3 | | | | ※ | | | | |
| 16✕3 | ※ | ※ | | | | | | |

Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕4 | ※ | ※ | ※ | ※ | ※ | | | |
| 4✕4 | ※ | ※ | ※ | ※ | | | | |
| 9✕4 | ※ | ※ | | | | | | |
| 16✕4 | | | | | | | | |

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# Detail result4

## ～ HP Compaq 8200 Elite SF Desktop PC (64bit) & FirePro2460 × 2 ～

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# Resolution：FULL HD

HP Compaq 8200 Elite SF Desktop PC(64bit) ＋ Acube FirePro2460 ✕ 2

4Mbps, 30fps(Frame rate mode), refresh interval 1sec.

Without Live Monitor

| Operation monitor sprit | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

| Judge | OK | NG | Impossible |
|---|---|---|---|
| Display | Full rate display | I frame display | |

NG judge
1.The video image has delay or jerk phenomenon
2. Over 70% of CPU usage ratio

Live monitor number : 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 4 | | | | | | | | |
| 9 | | | | | | | | |
| 16 | | | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | | | | | | | | |
| 64 | | | | | | | | |

Live monitor number : 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕2 | | | | | | | | |
| 4✕2 | | | | | | | | |
| 9✕2 | | | | | | | | |
| 16✕2 | | | | | | | | |
| 25✕2 | | | | | | | | |
| 36✕2 | | | | | | | | |
| 49✕2 | | | | | | | | |
| 64✕2 | | | | | | | | |

Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕3 | | | | | | | | |
| 4✕3 | | | | | | | | |
| 9✕3 | | | | | | | | |
| 16✕3 | | | | | | | | |

Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕4 | | | | | | | | |
| 4✕4 | | | | | | | | |
| 9✕4 | | | | | | | | |
| 16✕4 | | | | | | | | |

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# Resolution：SXVG Domestic

HP Compaq 8200 Elite SF Desktop PC(64bit) ＋ Acube FirePro2460 ✕ 2

4Mbps, 30fps(Frame rate mode), refresh interval 1sec.

Without Live Monitor

| Operation monitor sprit | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

| Judge | OK | NG | Impossible |
|---|---|---|---|
| Display | Full rate display | I frame display | |

NG judge
1.The video image has delay or jerk phenomenon
2. Over 70% of CPU usage ratio

Live monitor number : 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 4 | | | | | | | | |
| 9 | | | | | | | | |
| 16 | | | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | | | | | | | | |
| 64 | | | | | | | | |

Live monitor number : 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕2 | | | | | | | | |
| 4✕2 | | | | | | | | |
| 9✕2 | | | | | | | | |
| 16✕2 | | | | | | | | |
| 25✕2 | | | | | | | | |
| 36✕2 | | | | | | | | |
| 49✕2 | | | | | | | | |
| 64✕2 | | | | | | | | |

Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕3 | | | | | | | | |
| 4✕3 | | | | | | | | |
| 9✕3 | | | | | | | | |
| 16✕3 | | | | | | | | |

Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕4 | | | | | | | | |
| 4✕4 | | | | | | | | |
| 9✕4 | | | | | | | | |
| 16✕4 | | | | | | | | |

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# Resolution：SXVG Over sea

HP Compaq 8200 Elite SF Desktop PC(64bit) ＋ Acube FirePro2460 ✕ 2

4Mbps, 30fps(Frame rate mode), refresh interval 1sec.

Without Live Monitor

| Operation monitor sprit | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

| Judge | OK | NG | Impossible |
|---|---|---|---|
| Display | Full rate display | I frame display | |

NG judge
1.The video image has delay or jerk phenomenon
2. Over 70% of CPU usage ratio

Live monitor number : 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 4 | | | | | | | | |
| 9 | | | | | | | | |
| 16 | | | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | | | | | | | | |
| 64 | | | | | | | | |

Live monitor number : 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕2 | | | | | | | | |
| 4✕2 | | | | | | | | |
| 9✕2 | | | | | | | | |
| 16✕2 | | | | | | | | |
| 25✕2 | | | | | | | | |
| 36✕2 | | | | | | | | |
| 49✕2 | | | | | | | | |
| 64✕2 | | | | | | | | |

Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕3 | | | | | | | | |
| 4✕3 | | | | | | | | |
| 9✕3 | | | | | | | | |
| 16✕3 | | | | | | | | |

Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕4 | | | | | | | | |
| 4✕4 | | | | | | | | |
| 9✕4 | | | | | | | | |
| 16✕4 | | | | | | | | |

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# Resolution：VGA

HP Compaq 8200 Elite SF Desktop PC(64bit) ＋ Acube FirePro2460 ✕ 2

1.5Mbps, 30fps(Frame rate mode), refresh interval 1sec.

Without Live Monitor

| Operation monitor sprit | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

| Judge | OK | NG | Impossible |
|---|---|---|---|
| Display | Full rate display | I frame display | |

※ When the method of window display is [Expansion and reduction], It will be NG.

NG judge
1.The video image has delay or jerk phenomenon
2. Over 70% of CPU usage ratio

Live monitor number : 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 4 | | | | ※ | | | | |
| 9 | | | | | | | | |
| 16 | | ※ | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | | | | | | | | |
| 64 | | | | | | | | |

Live monitor number : 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕2 | | | ※ | | | | | |
| 4✕2 | | ※ | | | | | | |
| 9✕2 | | | | | | | | |
| 16✕2 | | | | | | | | |
| 25✕2 | | | | | | | | |
| 36✕2 | | | | | | | | |
| 49✕2 | | | | | | | | |
| 64✕2 | | | | | | | | |

Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕3 | | ※ | ※ | | | | | |
| 4✕3 | | | | | | | | |
| 9✕3 | | | | | | | | |
| 16✕3 | | | | | | | | |

Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕4 | ※ | ※ | | | | | | |
| 4✕4 | | | | | | | | |
| 9✕4 | | | | | | | | |
| 16✕4 | | | | | | | | |

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# Resolution：QVGA

HP Compaq 8200 Elite SF Desktop PC(64bit) ＋ Acube FirePro2460 ✕ 2

1Mbps, 30fps(Frame rate mode), refresh interval 1sec.

Without Live Monitor

| Operation monitor sprit | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

| Judge | OK | NG | Impossible |
|---|---|---|---|
| Display | Full rate display | I frame display | |

※ When the method of window display is [Expansion and reduction], It will be NG.

NG judge
1.The video image has delay or jerk phenomenon
2. Over 70% of CPU usage ratio

Live monitor number : 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | ※ | |
| 4 | | | | | | | ※ | |
| 9 | | | | | | | ※ | |
| 16 | | | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | ※ | ※ | ※ | | | | | |
| 64 | | | | | | | | |

Live monitor number : 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕2 | | | | | ※ | ※ | | |
| 4✕2 | | | | | ※ | | | |
| 9✕2 | | | | | | | | |
| 16✕2 | | | | | | | | |
| 25✕2 | | | | | | | | |
| 36✕2 | | | | | | | | |
| 49✕2 | | | | | | | | |
| 64✕2 | | | | | | | | |

Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕3 | | ※ | ※ | ※ | ※ | | | |
| 4✕3 | ※ | ※ | ※ | ※ | | | | |
| 9✕3 | ※ | ※ | ※ | ※ | | | | |
| 16✕3 | | | | | | | | |

Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕4 | ※ | ※ | ※ | ※ | | | | |
| 4✕4 | ※ | ※ | ※ | ※ | | | | |
| 9✕4 | | | | | | | | |
| 16✕4 | | | | | | | | |

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# Detail result5

## ～ HP Compaq 8200 Elite MT Desktop PC (32bit) & Quadro × 2 ～

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# Resolution：FULL HD

HP Compaq 8200 Elite MT(32bit) ＋ NVIDIA Quadro NVS 450 ✕ 2

4Mbps, 30fps(Frame rate mode), refresh interval 1sec.

NG judge

1.The video image has delay or jerk phenomenon

2. Over 70% of CPU usage ratio

3. Memory residual quantity: within 500MB

Without Live Monitor

| Operation window sprits | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

| Judge | OK | NG | Impossible |
|---|---|---|---|

| Display | Full rate display | I frame display |
|---|---|---|

Live monitor number : 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 4 | | | | | | | | |
| 9 | | | | | | | | |
| 16 | | | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | | | | | | | | |
| 64 | | | | | | | | |

Live monitor number : 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕2 | | | | | | | | |
| 4✕2 | | | | | | | | |
| 9✕2 | | | | | | | | |
| 16✕2 | | | | | | | | |
| 25✕2 | | | | | | | | |
| 36✕2 | | | | | | | | |
| 49✕2 | | | | | | | | |
| 64✕2 | | | | | | | | |

Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕3 | | | | | | | | |
| 4✕3 | | | | | | | | |
| 9✕3 | | | | | | | | |
| 16✕3 | | | | | | | | |

Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕4 | | | | | | | | |
| 4✕4 | | | | | | | | |
| 9✕4 | | | | | | | | |
| 16✕4 | | | | | | | | |

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# Resolution：SXVGA

HP Compaq 8200 Elite MT(32bit) ＋ NVIDIA Quadro NVS 450 ✕ 2

Domestic 4Mbps, 30fps(Frame rate mode), refresh interval 1sec.

| Judge | OK | NG | Impossible |
|---|---|---|---|

| Display | Full rate display | I frame display |
|---|---|---|

NG judge
1.The video image has delay or jerk phenomenon
2. Over 70% of CPU usage ratio
3. Memory residual quantity: within 500MB

## Without Live Monitor

| Operation monitor sprit | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

## Live monitor number : 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 4 | | | | | | | | |
| 9 | | | | | | | | |
| 16 | | | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | | | | | | | | |
| 64 | | | | | | | | |

## Live monitor number : 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕2 | | | | | | | | |
| 4✕2 | | | | | | | | |
| 9✕2 | | | | | | | | |
| 16✕2 | | | | | | | | |
| 25✕2 | | | | | | | | |
| 36✕2 | | | | | | | | |
| 49✕2 | | | | | | | | |
| 64✕2 | | | | | | | | |

## Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕3 | | | | | | | | |
| 4✕3 | | | | | | | | |
| 9✕3 | | | | | | | | |
| 16✕3 | | | | | | | | |

## Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕4 | | | | | | | | |
| 4✕4 | | | | | | | | |
| 9✕4 | | | | | | | | |
| 16✕4 | | | | | | | | |

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# Resolution：SXVGA Over sea

HP Compaq 8200 Elite MT(32bit) ＋ NVIDIA Quadro NVS 450 ✕ 2

4Mbps, 30fps(Frame rate mode), refresh interval 1sec.

Without Live Monitor

| Operation monitor sprit | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

| Judge | OK | NG | Impossible |
|---|---|---|---|

| Display | Full rate display | I frame display |
|---|---|---|

NG judge

1.The video image has delay or jerk phenomenon

2. Over 70% of CPU usage ratio

3. Memory residual quantity: within 500MB

Live monitor number : 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 4 | | | | | | | | |
| 9 | | | | | | | | |
| 16 | | | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | | | | | | | | |
| 64 | | | | | | | | |

Live monitor number : 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕2 | | | | | | | | |
| 4✕2 | | | | | | | | |
| 9✕2 | | | | | | | | |
| 16✕2 | | | | | | | | |
| 25✕2 | | | | | | | | |
| 36✕2 | | | | | | | | |
| 49✕2 | | | | | | | | |
| 64✕2 | | | | | | | | |

Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕3 | | | | | | | | |
| 4✕3 | | | | | | | | |
| 9✕3 | | | | | | | | |
| 16✕3 | | | | | | | | |

Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕4 | | | | | | | | |
| 4✕4 | | | | | | | | |
| 9✕4 | | | | | | | | |
| 16✕4 | | | | | | | | |

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# Resolution：VGA

HP Compaq 8200 Elite MT(32bit) ＋ NVIDIA Quadro NVS 450 ✕ 2

1.5Mbps, 30fps(Frame rate mode), refresh interval 1sec.

NG judge

1.The video image has delay or jerk phenomenon

2. Over 70% of CPU usage ratio

3. Memory residual quantity: within 500MB

Without Live Monitor

| Operation monitor sprit | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

| Judge | OK | NG | Impossible |
|---|---|---|---|

| Display | Full rate display | I frame display |
|---|---|---|

※ When the method of window display is [Expansion and reduction], It will be NG.

Live monitor number : 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 4 | | | | | | | | |
| 9 | | | | | | | | |
| 16 | | | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | | | | | | | | |
| 64 | | | | | | | | |

Live monitor number : 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕2 | | | | | | | | |
| 4✕2 | | | | | ※ | | | |
| 9✕2 | | | | ※ | | | | |
| 16✕2 | | | ※ | | | | | |
| 25✕2 | | | | | | | | |
| 36✕2 | | | | | | | | |
| 49✕2 | | | | | | | | |
| 64✕2 | | | | | | | | |

Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕3 | | | | | ※ | | | |
| 4✕3 | | | | ※ | | | | |
| 9✕3 | | ※ | ※ | | | | | |
| 16✕3 | | | | | | | | |

Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕4 | ※ | ※ | ※ | ※ | ※ | | | |
| 4✕4 | ※ | ※ | ※ | | | | | |
| 9✕4 | | | | | | | | |
| 16✕4 | | | | | | | | |

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# Resolution：QVGA

HP Compaq 8200 Elite MT(32bit) ＋ NVIDIA Quadro NVS 450 ✕ 2

1Mbps, 30fps(Frame rate mode), refresh interval 1sec.

NG judge

1.The video image has delay or jerk phenomenon

2. Over 70% of CPU usage ratio

3. Memory residual quantity: within 500MB

Without Live Monitor

| Operation monitor sprit | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

| Judge | OK | NG | Impossible |
|---|---|---|---|

| Display | Full rate display | I frame display |
|---|---|---|

※ When the method of window display is [Expansion and reduction], It will be NG.

Live monitor number : 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 4 | | | | | | | | |
| 9 | | | | | | | | |
| 16 | | | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | | | | | | | | |
| 64 | | | | | | | | |

Live monitor number : 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕2 | | | | | | | | |
| 4✕2 | | | | | | | | |
| 9✕2 | | | | | | | | |
| 16✕2 | | | | | | | | |
| 25✕2 | | | | | | | | |
| 36✕2 | | | | | | | | |
| 49✕2 | | | | | | | | |
| 64✕2 | | | | | | | | |

Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕3 | | | | | | | ※ | ※ |
| 4✕3 | | | | | | | ※ | |
| 9✕3 | | | | | | | | |
| 16✕3 | | | | | | | | |

Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕4 | | | | | | | ※ | ※ |
| 4✕4 | | | | | | ※ | ※ | |
| 9✕4 | | | | | | | | |
| 16✕4 | | ※ | | | | | | |

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# Appendix

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## Reference

**Graphic board**

Quadro NVS 450 > ATI FirePro2460

"Quadro NVS 450" can reduce a CPU load

In the case of I frame indication that the resolution is FULL HD,SXVGA etc, there is not the difference of the performance

**The method of screen display**

Aspect ratio > Expansion / reduction

*In the case of " Expansion / reduction" setting, CPU load is higher.

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# Resolution：SXVGA

HP Compaq 8200 Elite SF Desktop PC(64bit) ＋ Acube FirePro2460 ✕ 2

2Mbps, 15fps(Frame rate mode), refresh interval 1sec.

Without Live Monitor

| Operation monitor sprit | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
| | | | | | | | |

| Judge | OK | NG | Impossible |
|---|---|---|---|
| Display | Full rate display | I frame display | |

NG judge

1.The video image has delay or jerk phenomenon

2. Over 70% of CPU usage ratio

Live monitor number : 1

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1 | | | | | | | | |
| 4 | | | | | | | | |
| 9 | | | | | | | | |
| 16 | | | | | | | | |
| 25 | | | | | | | | |
| 36 | | | | | | | | |
| 49 | | | | | | | | |
| 64 | | | | | | | | |

Live monitor number : 2

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕2 | | | | | | | | |
| 4✕2 | | | | | | | | |
| 9✕2 | | | | | | | | |
| 16✕2 | | | | | | | | |
| 25✕2 | | | | | | | | |
| 36✕2 | | | | | | | | |
| 49✕2 | | | | | | | | |
| 64✕2 | | | | | | | | |

Live monitor number: 3

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

Live monitor number: 4

| Live monitor \ Operation monitor sprit | 1 | 4 | 9 | 16 | 25 | 36 | 49 | 64 |
|---|---|---|---|---|---|---|---|---|
| 1✕4 | | | | | | | | |
| 4✕4 | | | | | | | | |
| 9✕4 | | | | | | | | |
| 16✕4 | | | | | | | | |

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